Title (en)

PLATE HEAT EXCHANGER

Title (de)

PLATTENWÄRMETAUSCHER

Title (fr)

ECHANGEUR DE CHALEUR A PLAQUES

Publication

EP 0901602 A1 19990317 (DE)

Application

EP 97920477 A 19970520

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Abstract (en)

[origin: WO9745689A1] The invention concerns a heat exchanger which has a plate stack (24) and comprises first and second plates (1a, 1b, 1c, 1d) which are arranged alternately in rows and between which first and second channels (11, 12) are formed, these channels being connected via first and second connection regions to first and second connection openings (21, 23, 25). The first connection openings (21, 23), first connection regions and first channels (12) are completely separate from the second (25, 11). The first and second plates (1a, 1b, 1c, 1d) each have on both sides a plurality of substantially straight main channels (13, 17; 14, 16) which are aligned parallel in each plate (1a, 1b, 1c, 1d). The first channels (12) and second channels (11) consist of first and second main channels (13, 14) and third and fourth main channels (16, 17) which mutually form a first angle and are formed on both sides of a first connection plane (7, 7') and a second connection plane (8, 8') in the form of half-channels which are open towards the connection plane. The fourth main channels (17) and second main channels (14) are formed on one side of a first plate (1b, 1d) and second plate (1a, 1c), and the first main channels (13) and third main channels (16) are formed on the other. The plates are metal sheets whose main channels on both sides take the form of beads (5a, 5b) which appear on one side of the metal sheet as depressions and on the other as burr-like projections. On one side of the metal sheet, a contact surface (2a, 2b, 2c, 2d) is provided along the periphery, and, on the other, two contact regions (4a, 4b, 4c, 4d), each enclosing a passage opening, are provided, such that, by joining together the metal sheets with the same sides or planes in each case, contact surfaces (2a, 2b, 2c, 2d) and contact regions (4a, 4b, 4c, 4d) alternately always abut one another and are tightly interconnected, in particular welded or soldered together, in order to separate the first and second channels (12, 11) in a leaktight manner.

IPC 1-7

F28D 9/00

IPC 8 full level

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Citation (search report)

See references of WO 9745689A1

Cited by

CN106885396A; DE102004022433B4; US9849404B2; WO2013150175A1

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